
Deherainia lageniformis (Theophrastaceae), a New Species from Costa Rica

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ABSTRACT. *Deherainia lageniformis* Gómez-Laurito & N. Zamora, from Costa Rica, is described, illustrated, and compared with its closest relative.

RESUMEN. Se describe de Costa Rica una nueva especie de *Deherainia* (Theophrastaceae), además se ilustra y se compara con la otra especie cercana.

Deherainia Decaisne (Theophrastaceae) is a small neotropical genus of much-branched treelets with chartaceous leaves and green flowers. According to the most recent account (Stahl, 1989), it comprises just two species: *D. matudae* Lundell, distributed from Chiapas to Guatemala, and *D. smaragdina* (Planchon ex Linden) Decaisne, ranging from Veracruz to Belize and Honduras. *Deherainia cubensis* (Radlkofer) Mez has been relegated to the monotypic genus *Neomezia* as *N. cubensis* (Radlkofer) Votsch, endemic to Cuba. A third species of *Deherainia* from the Cordillera de Tilarán and Cordillera de Guanacaste in northern Costa Rica is described below. This new record provides a considerable range extension of the genus from the nearest known locality in Honduras.

Deherainia lageniformis Gómez-Laurito & N. Zamora, sp. nov. TYPE: Costa Rica. Guanacaste: Cañas, Parcelas Nueva Guatemala, Estrabaciones del Volcán Tenorio, 1000 m, 10°37'30"N, 85°00'45"W, 18 ene. 1994, G. Herrera 6779 (holotype, USJ; isotypes, CR, F, INB, MO). Figure 1.

D. matudae affinis, praecipue differt foliis junioribus apice aristatis; foliis maturis ellipticis ad oblanceolatis, apice aristatis; floribus majoribus, corolla intra in medio lepidota et in tertio basale pilis glanduliferis provista, staminodiis ellipticis, apice truncatis; fructu ovato ad lageniformi, magno, apice aristato.

Trees 5–8 m tall with many branches. Branchlets stiff, angulate to terete, lepidote to glabres-

cent. Young leaves in 2 verticels around the nodes, 2–10 mm long, setaceous to lanceolate, with a spinelike mucro at the tip. Mature leaves subverticillate, 4 or 5 per node, when fresh with a mint odor of yerbabuena (*Haber et al. 11234*). Petioles 5–7 mm long, striate, glabrous, greenish yellow. Lamina elliptic to oblanceolate 12–22 × 4–6 cm, glabrous and with minute pits sparsely scattered on both sides, chartaceous, green above and greenish yellow beneath with the middle nerve prominent and lateral nerves slender, with numerous fine, strongly ascending and anastomosing strands of extraxillary sclerenchyma, entire at the margins, acute at the apex with a short spinelike mucro, attenuate at the base. Inflorescence of 7 or 8 flowers inserted at the ends of the branchlets. Pedicels of mature flowers 25–30 mm long, striate, glabrous. Flowers to 25 mm long, campanulate, unpleasantly scented. Calyx 6–8 mm long, 5-parted, lobes broadly rounded at apex, green, imbricate, glabrous, irregularly dentate, erose and usually brownish at margin, persisting in fruit. Corolla 5-parted, lobes ca. 20 mm long, united basally in a 5-mm tube, elliptic to broadly elliptic, green, yellowish and involute at margin, with minute sunken glandular hairs in the middle, and gland-tipped hairs on the basal third, glabrous outside. Staminodia elliptic, about 2 mm long, obtuse to truncate at the apex, margins involute, sparsely lepidote and with minute gland-tipped hairs in the inner surface. Stamens 5, slightly exerted; filaments 4 mm long, slender, glabrous, flat, broad at base and connate into a very short tube; anthers ca. 2 mm long, suborbicular, truncate at apex, dorsifixed, 2-celled, longitudinally dehiscent. Ovary ovate, ca. 3 mm long; style 4 mm long, glabrous with a discoid stigma. Fruits green, pendulous, ovoid to flask-shaped, about 14 cm long and 7 cm broad, green, acute at the tip with



Figure 1. *Deherainia lageniformis* Gómez-Laurito & N. Zamora (Herrera 6779, USJ). —a. Flowering branch. —b. Dissected corolla; b.1. Sunken glandular hairs; b.2. Gland-tipped hairs (Haber et al. 11234, INB). —c. Dissected fruit. —d. Seed.

a spinelike mucro; pedicels 3–4 cm long, glabrous. Seeds 15 mm long, 10 mm wide, 7 mm thick, elliptic to broadly elliptic, flattened to rounded and irregularly angled, hard, finely rugose, cream, translucent, immersed in a mucilaginous whitish pulp.

Deherainia lageniformis is an uncommon endemic to Costa Rica on the Pacific slopes of the Volcán Tenorio in the Cordillera de Guanacaste (Guanacaste province) and the Atlantic slopes of the Cordillera de Tilarán in the Reserva Bosque Eterno de los Niños, San Carlos, and near the Reserva Biol-

ógica Alberto M. Brenes in San Ramón (Alajuela province) from 500 to 1000 m, in the biotic units described by Herrera and Gómez (1993) as "a-Templada, tropical muy húmeda sin meses secos. b-Subtropical, muy húmeda con 1–2 meses secos." It is closely related to *D. matudae* (Lundell, 1938) from which it differs particularly in having young leaves with a spinelike mucro; mature leaves with a short spinelike mucro at the tip; pedicels 25–30 mm long; large flowers (to 25 mm long) with an indumentum of two kinds of hairs in the inner corolla surface (sunken glandular hairs on the middle and gland-tipped hairs on the basal third); lobes elliptic to broadly elliptic with erose and involute margins; and staminodia elliptic, obtuse to truncate at the apex. The most striking feature is the large fruit (to 14 × 7 cm), which is ovate to flask-like at maturity (whence the specific epithet) with a spine-like tip.

Paratypes. COSTA RICA. **Alajuela:** Bosque eterno

de los niños, 4 Km SO de La Tigra de San Carlos, Valle del Río La Esperanza, Finca Araya-Ledezma, 10°18'N, 84°37'W, 600–800 m, July 1992, *W. Haber et al.* 11234 (INB, MO, USJ); San Ramón, Bajo Rodríguez, Río La Esperanza, Quebrada Mirasol, Finca Araya, 10°18'30"N, 84°35'W, 500–600 m, 10 mar. 1993, *Bello et al.* 4852 (INB, MO, USJ); Los Chiles, Llanura de Los Guatusos, La Tigra, Finca Araya, 10°44'N, 84°43'W, 80 m, 18 Apr. 1989, *S. Schick* 20 (INB).

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Literature Cited

- Herrera, W. & L. D. Gómez. 1993. Mapa de Unidades bióticas de Costa Rica. Escala 1: 685.000. Instituto Geográfico de Costa Rica.
- Lundell, C. L. 1938. Studies of Mexican and Central American Plants—IV. *Amer. Midl. Naturalist* 20: 236–242.
- Stahl, B. 1989. A synopsis of Central American Theophrastaceae. *Nordic J. Bot.* 9: 15–30.